

CLAIM LISTINGS

Pursuant to 37 CFR §1.121(c), this listing of the claims, including the text of the claims, will serve to replace all prior versions of the claims, in the application.

Please amend claims 1, 13, 14, 16-19, 21-23 and 26 without prejudice or disclaimer as follows:

1. (Currently Amended) A terminal registration method using a session initiation protocol, comprising:

transmitting a media access control address to a session initiation protocol server [[by]] from a terminal in a voice over Internet protocol system including the terminal and the session initiation protocol server;

retrieving a database comprising terminal information for the terminal in accordance with the media access control address, and transmitting to the terminal, from the session initiation protocol server receiving the media access control address from the terminal, the terminal information for the terminal in accordance with the received media access control address;

transmitting from the terminal to the session initiation protocol server, ~~from the terminal~~; a register message including the ~~obtained~~ terminal information and including a first predetermined value assigned to a field value [[of]] for a telephone number field;

retrieving the database, and transmitting ~~to the terminal~~; from the session initiation protocol sever to the terminal, receiving ~~,from the terminal, the register message including the terminal information and including the first predetermined value assigned to the field value of the telephone number field;~~ a second field value of the telephone number field and user registration information in accordance with the terminal information received from the terminal, with the session initiation

18 protocol server receiving, from the terminal, the register message including the terminal information
19 and including the first predetermined value assigned to the field value of the telephone number field;

20 requesting, at the terminal, the session initiation protocol server to perform registration by
21 using the user registration information received by the terminal;

22 performing the registration ~~[[of]]~~ for the terminal, and transmitting from the session initiation
23 protocol server to the terminal, a registration success message ~~from the session initiation protocol~~
24 ~~server receiving,~~ with the session initiation protocol server receiving, from the terminal, a
25 registration request signal including the user registration information; ~~a registration success message;~~
26 and

27 the steps of retrieving the database, and transmitting the user registration information further
28 comprising the sub-steps of:

29 parsing the register message, and requesting a location server,
30 at the session initiation protocol server receiving, from the terminal,
31 the register message including the terminal information and including
32 the first predetermined value, to transmit the user registration
33 information in accordance with the terminal information;

34 retrieving the database, and transmitting to the session
35 initiation protocol server, at the location server requested by the
36 session initiation protocol server to transmit the user registration
37 information, the user registration information in accordance with the
38 terminal information; and

39 transmitting the user registration information to the terminal,
40 from the session initiation protocol server to the terminal, with the

41 session initiation protocol server receiving, from the location server,
42 ~~the user registration information~~, the received user registration
43 information.

1 2. (Original) The method of claim 1, wherein the terminal information includes Internet
2 protocol address, Subnet, and domain name server information of the terminal.

3. (Canceled)

1 4. (Canceled)

1 5. (Previously Presented) The method of claim 1, with the first predetermined value
2 transmitted to the session initiation protocol server from the terminal in the step of transmitting the
3 register message being a predetermined telephone number unused by users.

1 6. (Previously Presented) The method of claim 1, during the transmission of the media
2 access control address from the terminal to the session initiation protocol server, the media access
3 control address being transmitted by using a broadcasting method.

1 7. (Previously Presented) The method of claim 1, wherein the step of retrieving the
2 database, and transmitting terminal information for the terminal comprises the sub-steps of:
3 transmitting to the location server, from the session initiation protocol server receiving the
4 media access control address from the terminal, the received media access control address;

retrieving the database, and transmitting to the session initiation protocol server, from the location server receiving the media access control address from the session initiation protocol server, the terminal information in accordance with the received media access control address; and transmitting to the terminal, from the session initiation protocol server receiving the terminal information from the location server, the received terminal information.

8. (Canceled)

9. (Previously Presented) The method of claim 1, with a message used to transmit the user registration information to the terminal from the proxy server being "401 Error Message".

10. (Previously Presented) The method of claim 1, with a message used to carry the user registration information from the session initiation protocol server to the terminal being an error message.

11. (Previously Presented) The method of claim 1, wherein the step of performing the registration of the terminal, and transmitting the registration success message comprises the sub-steps of:

transmitting to the location server, from the session initiation protocol server receiving, from the terminal, a registration message including the user registration information, the received registration message;

comparatively analyzing the registration message by parsing the registration message, performing registration when the registration message is successful, and transmitting to the session

9 initiation protocol server, from the location server, a success message; and
10 transmitting the received success message from the session initiation protocol server to the
11 terminal.

1 12. (Previously Presented) The method of claim 1, wherein a request message comprises at
2 least a sequence number, an identification, and an media access control address; and
3 a response message comprises at least a sequence number, an identification, and a reason.

1 13. (Currently Amended) A computer-readable storage medium having computer-executable
2 instructions for performing a method, the method comprising:

3 transmitting a first address from a terminal to a session initiation protocol server;
4 retrieving a database containing terminal information for the terminal in accordance with the
5 first address, and transmitting the terminal information for the terminal in accordance with the first
6 address received by the session initiation protocol server;

7 transmitting from the terminal to the session initiation protocol server, ~~from the terminal~~; a
8 register message including the terminal information and including a first predetermined value
9 assigned to a field value of a telephone number field;

10 transmitting from the session initiation protocol sever receiving to the terminal, ~~from the~~
11 ~~session initiation protocol sever receiving, from the terminal, the register message including the~~
12 ~~terminal information and including the first predetermined value assigned to the field value of the~~
13 ~~telephone number field~~; a second predetermined value of the telephone number field and user
14 registration information in accordance with the terminal information received from the terminal, with
15 the session initiation protocol sever receiving, from the terminal, the register message including the

16 terminal information and including the first predetermined value assigned to the field value of the
17 telephone number field;

18 requesting, [[at]] from the terminal, the session initiation protocol server to perform
19 registration by using the user registration information received by the terminal;

20 performing the registration of the terminal, and transmitting ~~to the terminal;~~ from the session
21 initiation protocol server to the terminal, a registration success message, with the session initiation
22 protocol server receiving, from the terminal, a registration request signal including the user
23 registration information; ~~a registration success message;~~ and

24 the steps of retrieving the database, and transmitting the user registration information further
25 comprising the sub-steps of:

26 parsing the register message, and requesting a location server,
27 at the session initiation protocol server receiving, from the terminal,
28 the register message including the terminal information and including
29 the first predetermined value, to transmit the user registration
30 information in accordance with the terminal information;

31 retrieving the database, and transmitting to the session
32 initiation protocol server, at the location server requested by the
33 session initiation protocol server to transmit the user registration
34 information, the user registration information in accordance with the
35 terminal information; and

36 transmitting to the terminal, from the session initiation
37 protocol server receiving, from the location server, the user
38 registration information, the received user registration information.

1 14. (Currently Amended) The computer-readable storage medium having computer-
2 executable instructions for performing the method of claim 13, wherein the step of retrieving the
3 database, and transmitting terminal information of the terminal comprises the sub-steps of:

4 transmitting to the location server, from the session initiation protocol server receiving the
5 first address from the terminal, the received first address;

6 retrieving the database, and transmitting to the session initiation protocol server, from the
7 location server receiving the first address from the session initiation protocol server, the terminal
8 information in accordance with the received first address; and

9 transmitting to the terminal, from the session initiation protocol server receiving the terminal
10 information from the location server, the received terminal information.

1 15. (Canceled)

1 16. (Currently Amended) The computer-readable storage medium having computer-
2 executable instructions for performing the method of claim 13, with a message used to transmit the
3 user registration information to the terminal from the proxy server being an error message.

1 17. (Currently Amended) The computer-readable storage medium having computer-
2 executable instructions for performing the method of claim 13, wherein the step of performing the
3 registration of the terminal, and transmitting a registration success message comprises the sub-steps
4 of:

5 transmitting to the location server, from the session initiation protocol server receiving, from

6 the terminal, a registration message including the user registration information, the received
7 registration message;

8 comparatively analyzing the registration message by parsing the registration message,
9 performing registration when the registration message is successful, and transmitting to the session
10 initiation protocol server, from the location server, a success message; and

11 transmitting the received success message from the session initiation protocol server to the
12 terminal.

1 18. (Currently Amended) A computer-readable storage medium having stored thereon a data
2 structure, comprising:

3 a first field containing data representing a transmission of a media access control address
4 from a terminal to a session initiation protocol server;

5 a second field containing data representing a retrieval of a database comprising terminal
6 information for the terminal in accordance with the media access control address, and a transmission,
7 ~~to the terminal~~, from the session initiation protocol server to the terminal, of the terminal information
8 for the terminal corresponding to the received media access control address, with the session
9 initiation protocol server receiving the media access control address from the terminal, ~~of the~~
10 ~~terminal information for the terminal corresponding to the received media access control address;~~

11 a third field containing data representing a transmission, from the terminal to the session
12 initiation protocol server, of a register message comprising the obtained terminal information and
13 a first predetermined value assigned to a field value of a telephone number field;

14 a fourth field containing data representing a retrieval of a database, and a transmission, ~~to~~
15 ~~the terminal~~, from the session initiation protocol sever to the terminal, of a second predetermined

16 value of the telephone number field and user registration information in accordance with the terminal
17 information received from the terminal, with the session initiation protocol server receiving, from
18 the terminal, the register message comprising the terminal information and the first predetermined
19 value assigned to the field value of the telephone field, of a second predetermined value of the
20 telephone number field and user registration information in accordance with the terminal information
21 received from the terminal;

22 a fifth field containing data representing a request, made by the terminal, for requesting the
23 session initiation protocol server to perform registration by using the received user registration
24 information;

25 a sixth field containing data representing the registration of the terminal, and a transmission,
26 ~~to the terminal,~~ from the session initiation protocol server to the terminal, of a registration success
27 message, with the session initiation protocol server receiving, from the terminal, a registration
28 request signal including the user registration information, of a registration success message; and

29 the fourth field further comprising:

30 a first sub-field containing data representing a parse of the
31 register message, and a request made by the session initiation protocol
32 server receiving, from the terminal, the register message including the
33 terminal information and including the first predetermined value
34 assigned to the field value of the telephone number field, for
35 requesting a location server to transmit the user registration
36 information in accordance with the terminal information;

37 a second sub-field containing data representing the retrieval
38 of the database, and the transmission, ~~to the proxy server,~~ from the

location server ~~to the proxy server, requested to transmit the user~~
~~registration information from the proxy server;~~ of the user registration
information in accordance with the terminal information, with the
location server being requested to transmit the user registration
information from the proxy server; and

a third sub-field containing data representing the transmission,
~~to the terminal;~~ from the proxy server to the terminal, receiving, from
~~the location server, the user registration information;~~ of the received
user registration information, with the proxy server receiving the user
registration information from the location server.

19. (Currently Amended) The computer-readable storage medium having stored thereon the
data structure of claim 18, wherein the second field comprises:

a fourth sub-field containing data representing a transmission to the location server, from the
session initiation protocol server receiving, from the terminal, the media access control address, of
a received media access control address;

a fifth sub-field containing data representing the retrieval of the database, and a transmission,
to the session initiation protocol server, from the location server receiving the media access control
address from the proxy server, of the terminal information in accordance with the received media
access control address; and

a sixth sub-field containing data representing the transmission, to the terminal, from the
session initiation protocol server receiving the terminal information from the location server, of the
received terminal information.

1 20. (Canceled)

1 21. (Currently Amended) The computer-readable storage medium having stored thereon the
2 data structure of claim 18, wherein the sixth field comprises:

3 a seventh sub-field containing data representing a transmission, to the location server, from
4 the session initiation protocol server receiving, from the terminal, a registration message including
5 the user registration information, of the received registration message; and

6 an eighth sub-field containing data representing a comparative analysis of the registration
7 message by parsing the registration message, performing registration when the registration message
8 is successful, and transmitting a success message to the session initiation protocol server by the
9 location server.

1 22. (Currently Amended) The computer-readable storage medium having stored thereon the
2 data structure of claim 21, wherein the sixth field further comprises:

3 a ninth sub-field containing data representing a transmission of the received success message
4 from the session initiation protocol server to the terminal.

1 23. (Currently Amended) A voice over Internet protocol system, comprising:
2 a session initiation protocol server; and
3 a terminal transmitting a media access control address to the session initiation protocol
4 server,
5 with the session initiation protocol server retrieving a database comprising terminal

6 information for the terminal in accordance with the media access control address, and the session
7 initiation protocol server transmitting, to the terminal, the terminal information for the terminal
8 corresponding to the received media access control address,

9 with the terminal transmitting a register message including the obtained terminal information
10 and a first predetermined value assigned to a field value of a telephone number field to the session
11 initiation protocol server,

12 with the session initiation protocol server retrieving the database, and the session initiation
13 protocol server transmitting, to the terminal, a second predetermined value of the telephone number
14 field and user registration information in accordance with the terminal information received from
15 the terminal,

16 with the terminal requesting that the session initiation protocol server [[to]] performs
17 registration by using the received user registration information, [[and]]

18 with the session initiation protocol server performing the registration of the terminal and
19 transmitting a registration success message to the terminal, and

20 with the session initiation protocol server retrieving the database and transmitting the user
21 registration information by:

22 parsing the register message, and requesting that a location
23 server, from the session initiation protocol server which receives,
24 from the terminal, the register message including the terminal
25 information and including the first predetermined value, transmits the
26 user registration information in accordance with the terminal
27 information;

28 retrieving the database, and transmitting, from the location

server which is requested by the session initiation protocol server to
transmit the user registration information, the user registration
information in accordance with the terminal information, to the
session initiation protocol server; and
transmitting the received user registration information from
the session initiation protocol server to the terminal, with the session
initiation protocol server receiving the user registration information
from the location server.

24. (Original) The system of claim 23, wherein the terminal information includes Internet
protocol address, Subnet, and domain name server information of the terminal.

25. (Canceled)

26. (Currently Amended) The system of claim [[25]] 24, wherein the first predetermined
value transmitted to the session initiation protocol server from the terminal in the step of transmitting
the register message is an unused telephone number.

27. (Previously Presented) A method, comprising:
obtaining terminal information, with the step of obtaining the terminal information performed
by:
obtaining a certain set of information for a terminal and a server by using a media access
control address;

transmitting to a proxy server, from the terminal and at least one of a plurality of access points, the media control address;

requesting by the proxy server for a location server to transmit terminal information in accordance with a received media access control address;

transmitting to the terminal, from the location server, certain information retrieved from a database of the terminal in accordance with the media access control address, and the database comprising the terminal information for the terminal in accordance with the media access control address; and

transmitting to the access points, the certain information retrieved from the database of the terminal, and the access points transmitting, to the terminal, the certain information for the terminal and certain information for the access point;

obtaining a first telephone number, with the obtaining of the first telephone number performed by:

when the terminal receives the terminal information, retransmitting the received terminal information to the proxy server through the access points;

setting the first telephone number to a predetermined unused telephone number;

considering, by the proxy server, authentication of the first telephone number transmitted from the terminal by the setting of the first telephone number to the predetermined unused telephone number;

requesting by the proxy server, the location server to transmit a second telephone number and registration information for the corresponding terminal by transmitting the received terminal information to the location server;

transmitting to the proxy server, by the location server, the second telephone number and the registration information for the corresponding terminal by retrieving a database;

transmitting the received second telephone number and the registration information to the access point; and

transmitting to the terminal, from the access point the second telephone number and the registration information for the terminal by inputting information obtained within an error message;

and

registering the terminal.

28. (Previously Presented) The method of claim 27, with the registering of the terminal, comprising:

receiving by the terminal, the second telephone number and the registration information from the proxy server performing a registration process after setting new values₁ with the terminal encoding the received second telephone number and the registration information to a predetermined format;

transmitting, to the access point, the second telephone number and the registration information by using a register method;

sending by the access point, the second telephone number and the registration information to the proxy server;

receiving by the proxy server, a register message from the terminal, comparing the register message, and when the register message is successful, the proxy server transmitting the register message to the location server, to perform registration; and

transmitting₂ by the location server₂ a predetermined successful message after performing the registration, and when any problem is generated, the location server transmitting a predetermined error message, and informing of a reason for the error message.

29. (Original) The method of claim 28, wherein the terminal information includes Internet protocol address, Subnet, and domain name server information of the terminal.

30. (Canceled)

31. (Previously Presented) The method of claim 27, with the registering of the terminal, comprising:

receiving by the terminal, the second telephone number and the registration information from the proxy server performing a registration process after setting new values₁ with the terminal encoding the received telephone number and the registration information to a predetermined format; transmitting, to the access point, the second telephone number and the registration information by using a register method;

sending by the access point, the second telephone number and the registration information to the proxy server;

receiving by the proxy server, a register message from the terminal comparing the register message, and when the register message is successful, the proxy server transmitting the register message to the location server, to perform registration; and

transmitting₂ by the location server₂ a predetermined message informing of a status after performing the registration.